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(57) Abstract: A diagnostic method for detecting cancerous epithelial cells by selectively marking the mitochondria of the cancer cells, by delivering to the epithelium a cationic supravital mitochondrial marking agent. Selective killing of cancerous epithelial cells in the presence of normal cells is effected by delivering a cationic supravital mitochondrial marking agent to epithelial cancer cells. The killing agent can also comprise the reaction product of the marking agent and a cancer chemotherapeutic drug or in admixture with drug.

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